

REPORT ON INSECT CONTROL PROJECTS OF 1936

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SEQUOIA NATIONAL PARK, CALIF.  
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Introduction:

This is a report on the insect control projects carried out in Sequoia National Park during 1936, against the Mountain Pine Beetle (*Dendroctonus Monticola*) and the Jeffrey Pine Beetle (*Dendroctonus Jeffreyi*). All work was done during the latter part of November and early December.

It was only in the Lodgepole District that control was deemed necessary. The infestation in the Wolverton Lake and Watchtower-Heather Lake units of this district was definitely on the up trend, as will be specifically mentioned later. Other districts were inspected and because of the relative small number of infested trees it was decided to do no control work at the present time. The number of trees spotted was only a small percent of the number of trees spotted in these same areas in 1935. This was especially true in areas in which control work was done in 1935.

The spotting of infested trees was accomplished by general observation and some cruising in most districts. The cruising method was used in the Wolverton and Watchtower-Heather Lake Units.

Lodgepole Camp Unit - Lodgepole Camp Area:

Historical: This area has had extensive control for a number of years. The control work in the fall of 1931 was by the burning method. Since then the control has been during the summer, using the solar method.

Present Conditions: Only two infested trees were found in 1936. These were Jeffrey Pines and were killed by the Jeffrey Pine Beetle (*Dendroctonus Jeffreyi*).

Methods: Spotting was done both by general observation and cruising. Treatment was by cutting and barking the trees only. Exposure was considered sufficient to destroy the beetles which were in the early and advanced larvae stages with few pupae.

Wolverton Lake Unit - Lodgepole Camp Area:

Location and Type: The control work in this area was on Lodgepole Pines only. The grove is rather small in extent and situated in the Wolverton Creek drainage above Wolverton Lake.

Wolverton Lake Unit - Lodgepole Camp Area. (Cont'd)

Historical: No control work has been done in this area. In the fall of 1935 a small infestation was noted. Three single mature trees and a group of six second growth trees were spotted. No control work followed.

Present Condition: During November 1936 this area was again spotted. The total number of infested trees found, being five mature trees and fourteen second growth trees, showed an increase of slightly over 100 percent, indicating necessity for control.

Methods: The spotting was done by cruising through the grove and examining each tree. All infested trees found were still unfaced. All infested trees spotted were cut down and burned.

Lodgepole Camp Unit:  
Wolverton Lake Unit:

Lodgepole Camp Area.

Costs of Field Work:

Spotting:	2 Man days (Foreman) . . . . .	\$ 12.28
	21 Trees - Average cost per tree . . .	.58
Treating:	33.5 CCC Man days at \$2.00 per day .c.	\$ 67.00
	4 Foreman Man days . . . . .	24.56
	Total	\$ 91.56

12 Hours Truck Time at \$.40 . . . . .	4.80
Total field cost of control	\$ 96.36

21 Trees Treated, av. cost per tree . .	\$ 4.59
3650 Bd/ft., av. cost per bd/ft . . . . .	0.026

Average bd/ft per tree . . . . .	173
Average bd/ft per CCC man day.	108.4
Number of man days per tree. .	1.6

Total Field Costs (spotting and treating..	\$ 108.64
Average Cost per M.B.F. . . . .	29.65
Total cost per tree . . . . .	5.17

Number acres controlled . . . . .	700 Acres
Total cost per acre	\$ 0.155

Lake Unit - Lodgepole Camp Area.

Location and Type: The unit spotted and treated lies along the horse trail between the Watchtower and Heather Lake. All infested trees spotted were Mountain Pine except for two Lodgepole Pines in the Heather Lake Campground.

Historical: No control work has been done in this area. In the fall of 1935 a small infestation was noted on the brink of the canyon beyond the Watchtower. Closer spotting showed seven infested trees fairly well grouped, and five scattered trees. A total of twelve Mountain Pines were found killed by the Mountain Pine Beetle (*Dendroctonus Monticolae*). No control work followed.

Present Condition: During November 1936 this area was again spotted. Near the group of seven 1935 kills were found nine infested trees. Just beyond, four more infested trees were found. Twelve more were found in close vicinity of those found in 1935. All of these trees were Mountain Pines killed by the Mountain Pine Beetle. This shows a very strong increase in the infestation. Two Lodgepole Pines were also found infested in the Heather Lake Campground.

Methods: The spotting was done by cruising through the grove and examining each tree. Only about 25 percent of the trees had begun to fade. The general treatment was to cut the tree and entirely bark it. No burning was done, as exposure was enough to kill all larvae, this being the stage of the beetle in all trees found, except two which showed some pupae.

Observations: The conditions found at the time of control in December did not warrant the continuing of the project. Only sixteen trees were treated. The remainder of the trees spotted will be treated and a more thorough spotting will be done in early spring by the Trail Camp to be put at Heather Lake.

Watchtower - Heather Lake Unit - Lodgepole Camp Area:

Costs of Field Work:

Spotting:	1 Man day (Foreman) . . . . .	\$ 6.14
	30 Trees - Average cost per tree . . . .	0.17
Treating:	51 CCC Man days at \$2.00 per day . . . .	\$102.00
	4 Foreman Man Days . . . . .	24.56
	Total	\$126.56
	9 Hours Truck Time at \$.40 . . . . .	3.60
	Total Field Cost of Control.	\$130.16

16 Trees Treated, av cost per tree . . \$ 8.14  
 3670 Bd/ft. Av. cost per b/dft. . . . . 0.038

Av. bd/ft per tree. . . 229  
 Av. bd/ft per CCC Manday 72  
 No. mandays per tree 3.2

Total Field Cost (Spotting and Treating) . \$136.30  
 Average cost per M.B.F. . . . . 37.08  
 Total cost per tree . . . . . 8.31

Acres controlled . . . . . 200 acres  
 Cost per acre . . . . . 0.68

Respectfully submitted:

CLIFFORD ROSENBERGER,  
 Forestry Foreman.

Approved: 9/16/36

FRANK BEEN  
 Acting Park Forester

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